

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant :	Horst Leitner, Anthony Smith) Group Art Unit: Unknown
)
Appl. No. :	Unknown)
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Filed :	Herewith)
)
For :	RETRACTABLE VEHICLE)
	STEP)
)
Examiner :	Unknown)

PETITION TO MAKE SPECIAL FOR NEW APPLICATION UNDER
37 C.F.R. § 1.102 AND M.P.E.P. §708.02 [VIII]

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Under the provisions of 37 C.F.R. § 1.102 and M.P.E.P. §708.02 [VIII], Applicants hereby petition to make special the above-identified application in order to advance its examination in the Patent and Trademark Office. The application is being filed with this petition.

A check for the payment of the fee of \$130 under 37 C.F.R. 1.17(h) is enclosed. Please charge any additional fees or credit overpayment to Deposit Account No. 11-1410.

Should a restriction requirement be necessary, Applicants request that prompt telephonic notice be given to Applicants' counsel, at which time Applicants will make an election without traverse.

A pre-examination search was conducted for retractable steps in the following areas:

Class 182, subclasses 88, 91, 127; Class 280, subclass 166.

Applicants submit with this petition a copy of each reference not already of record deemed most closely related to the subject matter encompassed by the claims.

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DISCUSSION OF THE REFERENCES

Applicants provide the following discussion of the references, which points out with the particularity required by 37 C.F.R. § 1.111(b) and (c) how the claimed subject matter is distinguished over the references.

German Utility Model No. G 89 10 933.3 ("Hymer")

The Hymer reference discloses a retractable step with arms 20, 21 which are pivotably connected to a vehicle bottom 2 at bearings 8, 9, and pivotably connected to a hinged step 13 at bearings 17, 18. The retractable step is movable between a retracted position (shown in dashed lines) and an extended position (shown in solid lines). When the step is retracted, the bearings 8, 9, 17, 18 define lines which appear to converge at a point inboard of the first bearing 8. In addition, the hinged step 13 appears to move initially downward as it moves from the retracted position to the extended position (see arrow 32).

In contrast, Claims 56 and 59-69 of the present application recite a retractable vehicle step assist comprising a first support arm and a second support arm which are connectable with respect to an underside of a vehicle so as to be pivotable about a first axis oriented generally parallel to the ground and a second axis oriented generally parallel to the ground, respectively. The step assist further comprises a step member having an upper stepping surface, and the first support arm and the second support arm are connected to the step member so that the first support arm and the second support arm are pivotable with respect to the step member about a third axis and a fourth axis, respectively. The fourth axis is located inboard from the third axis. The first support arm and the second support arm allow the step member to move between a retracted position and a deployed position downward and outboard from the retracted position. As the step assist is viewed in a plane perpendicular to the first axis, the first axis and the third axis define a first line and the second axis and the fourth axis define a second line, and the first line and the second line intersect at an instantaneous center of rotation of the step member. When the step member is in the retracted position, the instantaneous center of rotation is located at or inboard of the upper stepping surface, and outboard of the first axis.

Claims 57 and 70-75 of the present application recite a retractable vehicle step assist, comprising a first support arm and a second support arm. The first support arm and the second support arm are connectable with respect to an underside of a vehicle so as to be pivotable about a first axis oriented generally parallel to the ground and a second axis oriented generally parallel

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to the ground, respectively. The step assist further comprises a step member having an upper stepping surface. The first support arm and the second support arm are connected to the step member so that the first support arm and the second support arm are pivotable with respect to the step member about a third axis and a fourth axis, respectively. The fourth axis is located inboard from the third axis. The first support arm and the second support arm allow the step member to move between a retracted position and a deployed position downward and outboard from the retracted position. At least a portion of the upper stepping surface initially moves upward as the step member moves from the retracted position to the deployed position.

Claims 58 and 76-81 of the present application recite a retractable vehicle step assist, comprising a first support arm and a second support arm. The first support arm and the second support arm are connectable with respect to an underside of a vehicle so as to be pivotable about a first axis oriented generally parallel to the ground and a second axis oriented generally parallel to the ground, respectively. The step assist further comprises a step member having an upper stepping surface. The first support arm and the second support arm are connected to the step member so that the first support arm and the second support arm are pivotable with respect to the step member about a third axis and a fourth axis, respectively. The fourth axis is located inboard from the third axis. The first support arm and the second support arm allow the step member to move between a retracted position and a deployed position downward and outboard from the retracted position. The upper stepping surface follows a deployment path as the step member moves from the retracted position to the deployed position, and the deployment path includes an initial upward component.

These claimed arrangements are not disclosed in Hymer. For example (re Claims 56, 59-69), Hymer nowhere teaches an “instantaneous center of rotation [of the step member] ... located at or inboard of the upper stepping surface, and outboard of the first axis” when the step member of Hymer’s device is in the retracted position. Re Claims 57, 70-75, Hymer fails to teach, for example, an upper stepping surface wherein “[a]t least a portion of the upper stepping surface initially moves upward as the step member moves from the retracted position to the deployed position.” With regard to Claims 58, 76-81, Hymer likewise fails to teach, for example, an upper stepping surface which follows a deployment path which “includes an initial upward component.”

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The structures recited in the claims advantageously impart a “self-energizing” property to the claimed step assist, allowing it to support heavy loads on the stepping surface (as well as its own weight) when in the retracted position, without need for a separate locking system, etc. See specification at paragraphs 0166-0171. For at least these reasons, Claims 56-81 are patentable over Hymer.

U.K. Patent Specification No. 934,387 (“U.K. ‘387”)

The U.K. ‘387 reference discloses a foldable step assembly comprising a riser 17 and links 20 which are pivotably connected with respect to the underside of a vehicle floorboard 11 at pivot pins 18, 22. The riser 17 and links 20 are also pivotably connected to a step 15 at hinges 16 and pivot pins 21. The foldable step assembly is movable between a retracted position (Fig. 2) and an extended position (Figs. 1, 3). When the step is retracted, the hinges/pivot pins 16, 18, 21, 22 define lines which appear to converge at a point outboard of the step 15. The U.K. ‘387 reference does not mention or illustrate the movement path of the hinged step 13 as it moves from the retracted position to the extended position; therefore no mention is made of an initial upward movement of the step 15.

Therefore, the distinctions noted above with regard to Hymer apply with equal force to U.K. ‘387. For example, U.K. ‘387 teaches none of: (i) an “instantaneous center of rotation [of the step member] ... located at or inboard of the upper stepping surface, and outboard of the first axis” when the step member of the disclosed device is in the retracted position; (ii) an upper stepping surface wherein “[a]t least a portion of the upper stepping surface initially moves upward as the step member moves from the retracted position to the deployed position;” or (iii) an upper stepping surface which follows a deployment path which “includes an initial upward component.”

For at least these reasons, Claims 56-81 are patentable over U.K. ‘387.

U.S. Patent No. 2,436,961 to Gabriel (“Gabriel”)

Gabriel discloses a retractable step comprising arms 5, 6 which are pivotably connected to rails 3, which are in turn bolted to the bottom of a vehicle bed 1. The arms 5, 6 are also pivotably connected to a step 8, and the assembly is moveable from a retracted position (Figs. 1, 3) to an extended position (Figs. 2, 4). When the step is retracted, the pivotable connections of the arms 5, 6 define lines which appear to converge at a point inboard of the upper pivotable connection of

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the arm 5. The step moves initially downward as it moves from the retracted position to the extended position, because operation of the latch 15 “permits the step to swing toward the extended position.” See col. 2, line 40 - col. 3, line 2.

Therefore, as is true of the previously-described references, Gabriel teaches none of: (i) an “instantaneous center of rotation [of the step member] ... located at or inboard of the upper stepping surface, and outboard of the first axis” when the step member of the disclosed device is in the retracted position; (ii) an upper stepping surface wherein “[a]t least a portion of the upper stepping surface initially moves upward as the step member moves from the retracted position to the deployed position;” or (iii) an upper stepping surface which follows a deployment path which “includes an initial upward component.”

For at least these reasons, Claims 56-81 are patentable over Gabriel.

U.S. Patent No. 4,180,143 to Clugston (“Clugston”)

The Clugston patent discloses a step assembly 10 comprising link elements 50, 52 which are pivotably connected to a support member 38, which is in turn secured with respect to a vehicle floorboard 16. The link elements 50, 52 are also pivotably connected to an extension arm 48, to which is connected a step 60. The step assembly 10 is moveable from a retracted position (Fig. 2) to an extended position (Figs. 1, 4). When the step assembly 10 is retracted, the pivotable connections of the link elements 50, 52 define non-convergent, parallel lines. The step 60 moves initially downward as it moves from the retracted position to the extended position, because placement of the user’s foot upon the step 60 and application of sufficient downward pressure will cause the assembly 10 to move toward the extended position. See col. 4, lines 18-27.

Therefore, as is true of the previously-described references, Clugston teaches none of: (i) an “instantaneous center of rotation [of the step member] ... located at or inboard of the upper stepping surface, and outboard of the first axis” when the step member of the disclosed device is in the retracted position; (ii) an upper stepping surface wherein “[a]t least a portion of the upper stepping surface initially moves upward as the step member moves from the retracted position to the deployed position;” or (iii) an upper stepping surface which follows a deployment path which “includes an initial upward component.”

For at least these reasons, Claims 56-81 are patentable over Clugston.

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U.S. Patent No. 4,623,160 to Trudell (“Trudell”)

As best seen in Fig. 5, the Trudell patent discloses a two-stage retractable step assembly having upper and lower steps 23, 24 mounted on parallel linkage bars 35, 36, 38. See col. 2, line 55 - col. 3, line 13. Due to the parallel arrangement of the linkage bars 35, 36, 38, their pivotable connections to the upper frame 16 and steps 23, 24 define non-convergent, parallel lines. The parallel arrangement of the linkage bars 35, 36, 38 also causes the upper and lower steps to move initially downward as they advance from the retracted position (Fig. 3) to the extended position (Fig. 5).

Therefore, as is true of the previously-described references, Trudell teaches none of: (i) an “instantaneous center of rotation [of the step member] ... located at or inboard of the upper stepping surface, and outboard of the first axis” when the step member of the disclosed device is in the retracted position; (ii) an upper stepping surface wherein “[a]t least a portion of the upper stepping surface initially moves upward as the step member moves from the retracted position to the deployed position;” or (iii) an upper stepping surface which follows a deployment path which “includes an initial upward component.”

For at least these reasons, Claims 56-81 are patentable over Trudell.

U.S. Patent No. 6,375,207 to Dean et al. (“Dean”)

Dean discloses a retractable running board assembly that employs parallel links 116, 120 (see Figs. 4, 7; col. 2., lines 32-44; col. 3, lines 20-27; Abstract) to move a step 24 between a retracted position and an extended position. Due to the parallel arrangement of the links 116, 120, their pivotable connections to the mounting brackets 40, 44, 48, 52 and pivot arm assemblies 64, 68, 72, 76 define non-convergent, parallel lines. The parallel arrangement of the links 116, 120 also causes the step 24 to move initially downward as it advances from the retracted position to the extended position.

Therefore, as is true of the previously-described references, Dean teaches none of: (i) an “instantaneous center of rotation [of the step member] ... located at or inboard of the upper stepping surface, and outboard of the first axis” when the step member of the disclosed device is in the retracted position; (ii) an upper stepping surface wherein “[a]t least a portion of the upper stepping surface initially moves upward as the step member moves from the retracted position to the deployed position;” or (iii) an upper stepping surface which follows a deployment path which “includes an initial upward component.”

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For at least these reasons, Claims 56-81 are patentable over Dean.

Additional References

Applicant submits herewith a number of references, in addition to than those discussed in detail above. As will become evident from a brief review of these additional references, Claims 56-81 are patentable thereover, for at least the reasons stated above.

CONCLUSION

In view of the foregoing discussion, Applicants respectfully submit that the present invention is patentable over all of the references discussed above.

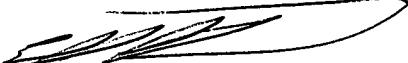
Accordingly, the Applicants respectfully request expedited allowance of the claims.

Applicants further respectfully submit that the requirements set forth under M.P.E.P. § 708.02 [VIII] for accelerated examination of the above-identified application have been satisfied. Therefore, Applicants respectfully request that this petition be granted.

Respectfully submitted,

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Dated: August 19, 2003

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